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Commissioner

March 6, 2013

John Filippelli
Director, Clean Air and Sustainability Division
USEPA, Region 2
290 Broadway, 26th Floor
New York, NY 10007-1866

RE: Termination of the Clean Air Act Section 185 fee requirement for the Northern New Jersey-New York-Connecticut (NNJ-NY-CT) Nonattainment Area

Dear Mr. Filippelli:

Enclosed is information supporting the termination for the Clean Air Act Section 185 penalty fee provision for the revoked 1-hour ozone standard in the Northern New Jersey-New York-Connecticut (NNJ-NY-CT) nonattainment area. The USEPA determined that the area attained the revoked 1-hour ozone standard in the June 18, 2012 Federal Register Notice (See 77 FR 36163). This determination by the USEPA recognized the air quality in the NNJ-NY-CT nonattainment area continues to show compliance with the revoked 1-hour ozone standard based on complete, quality-assured and certified ozone monitoring data for 2008–2010. Quality-assured ozone monitoring data in the Air Quality System for 2011 and preliminary 2012 data indicate the area continues to attain the revoked 1-hour ozone standard.

The enclosed report provides air quality and emission inventory data. The emissions inventories demonstrate the continued downward trend of oxides of nitrogen (NOx) and volatile organic compounds (VOC) emissions (precursors to ozone) in the NNJ-NY-CT nonattainment area. The report describes permanent and enforceable control measures adopted in New Jersey for the attainment of the 85 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS), which provides additional reduction measures that will contribute to improved air quality and the continued attainment of the 1-hour ozone NAAQS.

The Department continues to evaluate the steps needed to ensure that both nonattainment areas will attain the 75 ppb standard. New Jersey is a member of the Ozone Transport

Commission (OTC) and is involved with the identification and evaluation of additional control measures.

I would like to acknowledge your staff's cooperation in working with my staff to determine the necessary information to close the books on this issue. I urge USEPA to move timely with the termination of the section 185 penalty fee provision. If your staff has any technical questions, please contact Ms. Sharon Davis, Chief of Air Quality Planning, at (609) 292-6722.

Sincerely,

William O'Sullivan, Director
Division of Air Quality

Attachments

c: Jane Kozinski, Assistant Commissioner
Chris Salmi, Assistant Director Air Quality Management
Sharon Davis, Section Chief, Air Quality Planning
Rick Ruvo, USEPA
John Renella, DAG
Official SIP File

Clean Air Act Section 185 Termination for the Northern New Jersey-New York-Connecticut Nonattainment Area

March 1, 2013

Prepared by: Bureau of Air Quality Planning
New Jersey Department of Environmental Protection

INTRODUCTION

The Northern New Jersey-New York-Connecticut (NNJ-NY-CT) nonattainment area was classified as severe nonattainment under the revoked 1-hour Ozone National Ambient Air Quality Standards (NAAQS). In the event that a nonattainment area classified as "severe" or "extreme" fails to attain the ozone standard by the attainment deadline, Section 185 of the Clean Air Act may require that major stationary sources of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) located in such area to pay an annual penalty fee.

On January 19, 2011, the New Jersey Department of Environmental Protection ("Department") submitted a clean data determination request[1] for the 1-hour and 8-hour ozone standards for the NNJ-NY-CT area. In a June 18, 2012 federal register notice (see 77 FR 36163), the USEPA determined that the area attained the revoked 1-hour ozone standard based on complete, quality-assured and certified ozone monitoring data for 2008–2010.

This report includes the most recent air quality monitoring data showing continued attainment of the 1-hour ozone standard, decreasing trends in the emission of ozone precursors out to 2020, and documentation of additional rules not included in the 1-hour attainment plan, especially those measures implemented after the 2010 attainment year which ensure the continued attainment of the 1-hour standard out to the year 2020. Based on USEPA's June 18, 2012 determination and the information included in this report, the USEPA should remove the requirement to implement the provisions of Section 185 for the revoked 1-hour ozone NAAQS.

AIR QUALITY DATA

Table 1 reflects the complete, certified monitoring data from 2008 to 2011 and shows that the NNJ-NY-CT area continues to remain in attainment, with the design values for 2008-2010 and 2009-2011 below the 1-hour ozone NAAQS. The 2010-2012 fourth highest ozone values are also included in Table 1. At this time, the 2012 data is preliminary. Figure 1 illustrates the downward trend of the monitored 1-hour ozone values in New Jersey.

[1] January 19, 2011 letter from the Department's Commission Martin to USEPA Region 2 Administrator Enck.

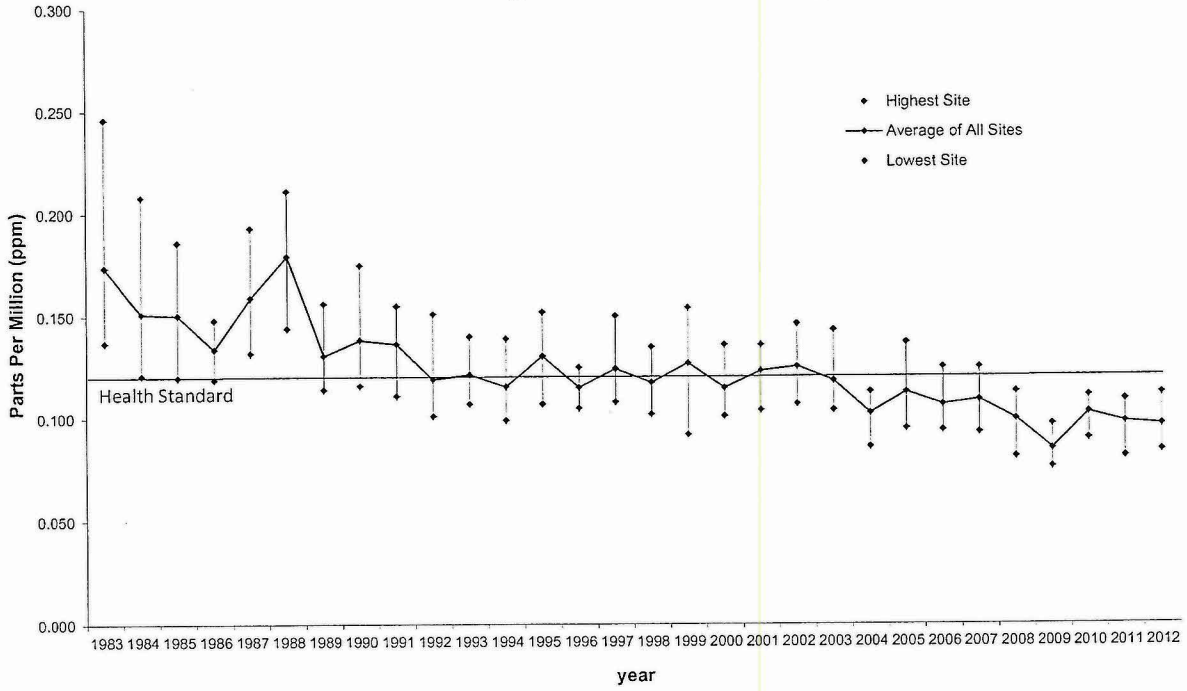
Table 1: 1-Hour Ozone Fourth Highest Value[2] for the NNJ-NY-CT Nonattainment Area

State	County	Monitoring Site	AQS Monitor ID	2008-2010 ppb	2009-2011 ppb	2010-2012 ppb
CT	Fairfield	Greenwich	09 001 0017	120	107	109
	Fairfield	Danbury	09 001 1123	116	109	109
	Fairfield	Stratford	09 001 3007	104	114	119
	Fairfield	Westport	09 001 9003	112	116	117
NJ	Bergen	Leonia	34 003 0006	111	105	111
	Essex	Newark Firehouse	34 013 0003	104	102	102
	Hudson	Bayonne	34 017 0006	103	103	103
	Hunterdon	Flemington	34 019 0001	101	96	96
	Middlesex	Rutgers University	34 023 0011	105	105	105
	Monmouth	Monmouth University	34 025 0005	105	106	107
	Morris	Chester	34 027 3001	94	94	95
	Ocean	Colliers Mills	34 029 0006	109	109	109
	Passaic	Ramapo	34 031 5001	92	92	92
NY	Bronx	IS52	36 005 0110	100	90	NA[3]
	Bronx	Pfizer Lab	36 005 0133	99	95	97
	New York	CCNY, NY	36 061 0135	100	99	99
	Queens	Queens	36 081 0124	102	102	107
	Richmond	Susan Wagner	36 085 0067	102	104	104
	Rockland	Mountain Road	36 087 0005	101	99	100
	Suffolk	Babylon	36 103 0002	109	121	123
	Suffolk	Riverhead	36 103 0004	102	100	105
	Suffolk	Holtsville	36 103 0009	97	102	113
	Westchester	White Plains	36 119 2004	104	99	99

[2] The 1-hour ozone 4th highest value is the 1-Hr Design Value. An area (site) is considered to be attaining the 1-hour average ozone standard if the average number of times the standard is exceeded at any one monitoring station over a 3-year period is 1 or less (after correcting for missing data) (40 C.F.R. 50, Appendix H). Thus, it is the 4th highest daily maximum 1-hour concentration that occurs over a 3-year period that determines if an area (site) is in attainment. If the 4th highest value is above 0.12 parts per million (ppm) then the average number of exceedances is greater than 1. The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is < 1.

[3] Site shut down after 2010 season.

Figure 1: Ozone Concentrations in New Jersey 1983-2012 Second Highest 1-Hour Averages



EMISSIONS INVENTORIES

The emissions in New Jersey's northern (NNJ-NY-CT) nonattainment area continue to trend downward and should continue to decrease based on the current and future projected emission inventories for oxides of nitrogen (NOx) and volatile organic compounds (VOC). Tables 2 and 3 show the actual and future projected emission inventories for New Jersey's counties in the NNJ-NY-CT nonattainment area. These inventories include both annual and ozone season tons per day for 2007, 2010, and 2020. The percent change between 2007 and the future years is also provided in Table 2 and shows a decrease.

The inventory data are from the ***2007 Inventory and Projections*** project on the MARAMA website (http://www.marama.org/), with the following exceptions:

- 2010 data was compiled with point source data from New Jersey facilities that submitted their 2010 Emission Statements. The 2010 emissions for the other source categories (area, onroad, and nonroad) were estimated using the 2007 and 2020 inventories.
- The summer tons per day data were calculated by the Department using the same methodologies as those used for the 2002 periodic emissions inventory for the point, area and non-road sectors.
- Onroad emissions were calculated using the MOVES model and run by NESCAUM for the regional MARAMA modeling inventory. The annual and summer day emissions were summarized from SMOKE reports.

The inventories include managed burning and wildfires (which EPA is currently reporting as events in their National Emissions Inventory). The inventories include a wildfire estimate averaged from 2000-2007 as described in New Jersey's request for redesignation of the Fine Particulate NAAQS[4].

Table 2: Total NOx Emissions for New Jersey Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	43.79	42.02	27.87	-4%	-36%	-34%	22,073	19,363	10,553	-12%	-52%	-45%
Essex	45.34	45.07	38.55	-1%	-15%	-14%	18,945	16,930	12,851	-11%	-32%	-24%
Hudson	46.57	46.86	27.71	1%	-40%	-41%	15,149	12,804	8,505	-15%	-44%	-34%
Hunterdon	21.95	19.71	8.48	-10%	-61%	-57%	5,215	4,470	2,106	-14%	-60%	-53%
Middlesex	64.63	56.86	38.82	-12%	-40%	-32%	21,793	19,021	10,949	-13%	-50%	-42%
Monmouth	31.00	28.21	18.28	-9%	-41%	-35%	14,685	12,968	7,289	-12%	-50%	-44%
Morris	32.86	28.50	14.77	-13%	-55%	-48%	13,139	11,380	5,723	-13%	-56%	-50%
Ocean	34.15	29.10	15.47	-15%	-55%	-47%	11,242	9,933	5,660	-12%	-50%	-43%
Passaic	25.07	21.45	9.13	-14%	-64%	-57%	8,210	7,185	3,820	-12%	-53%	-47%
Somerset	28.40	24.14	10.74	-15%	-62%	-56%	8,730	7,547	3,791	-14%	-57%	-50%
Sussex	16.88	13.95	4.18	-17%	-75%	-70%	3,192	2,833	1,689	-11%	-47%	-40%
Union	43.73	39.32	28.43	-10%	-35%	-28%	17,906	15,505	10,278	-13%	-43%	-34%
Total	434.38	395.20	242.44	-9%	-44%	-39%	160,280	139,938	83,214	-13%	-48%	-41%

Table 3: Total VOC Emissions for New Jersey Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	53.85	51.21	43.72	-5%	-19%	-15%	22,079	20,122	14,185	-9%	-36%	-30%
Essex	38.07	37.84	34.67	-1%	-9%	-8%	15,668	14,574	11,253	-7%	-28%	-23%
Hudson	33.24	30.25	24.60	-9%	-26%	-19%	10,640	9,793	7,907	-8%	-26%	-19%
Hunterdon	15.09	13.47	7.98	-11%	-47%	-41%	4,339	3,960	2,772	-9%	-36%	-30%
Middlesex	56.34	54.72	46.99	-3%	-17%	-14%	21,407	19,392	15,361	-9%	-28%	-21%
Monmouth	37.57	35.82	30.51	-5%	-19%	-15%	15,547	14,280	10,130	-8%	-35%	-29%
Morris	41.25	38.36	31.34	-7%	-24%	-18%	15,204	13,958	10,014	-8%	-34%	-28%
Ocean	48.50	43.74	27.96	-10%	-42%	-36%	16,591	14,982	9,681	-10%	-42%	-35%
Passaic	33.17	30.21	22.35	-9%	-33%	-26%	10,490	9,574	7,037	-9%	-33%	-27%
Somerset	27.49	25.51	17.91	-7%	-35%	-30%	8,547	7,882	5,718	-8%	-33%	-27%
Sussex	16.85	14.83	8.93	-12%	-47%	-40%	4,798	4,399	3,140	-8%	-35%	-29%
Union	37.17	34.21	30.87	-8%	-17%	-10%	14,329	12,695	9,938	-11%	-31%	-22%
Total	438.61	410.17	327.84	-6%	-25%	-20%	159,638	145,612	107,136	-9%	-33%	-26%

[4] The State of New Jersey Department of Environmental Protection State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Fine Particulate Matter (PM2.5) National Ambient Air Quality Standards Final Redesignation Request and Maintenance Plan For Annual 15 µg/m3 and Daily 35 µg/m3 PM2.5 National Ambient Air Quality Standards, December 2012.

Demonstration of Maintenance

New Jersey demonstrates maintenance of the revoked 1-hour ozone NAAQS by showing that future projected emissions are less than the attainment year inventory in the nonattainment area.[5] If the future year emissions are less than or equal to attainment year emissions, then modeling is not necessary.[6,7] Emissions of NOx and VOC are projected to decrease between 2007 and 2020, in New Jersey's portion of the NNJ-NY-CT area. In New Jersey's eight counties in the NNJ-NY-CT area, annual NOx emissions are projected to decrease by 77,066 tons per year (tpy) (48%), and summer time NOx emissions are projected to decrease by 192 tons per summer day (tpd) (44%). For the same area, annual VOC emissions are projected to decrease by 53,783 tpy (34%), and summer time VOC emissions are projected to decrease by 111 tpd (25%). The projection emission inventories for NOx and VOC demonstrate a significant decrease from 2007 to 2020, making it clear that New Jersey emissions will not increase above the attainment inventory. The details of this demonstration are shown in Tables 2 and 3, with more detailed tables in Attachment 1.

The projected emission reductions beyond 2007 demonstrate that existing permanent and enforceable control measures are sufficient to maintain compliance with the 120 ppb 1-hour ozone standard through 2020. Additional air quality strategies are being evaluated by USEPA and these states for the 75 ppb 8-hour ozone standard. Efforts to attain the 75 ppb NAAQS will enhance maintenance of the 1-hour 120 ppb NAAQS.

CONTROL MEASURES

In promulgating the 1997 85 ppb 8-hour ozone standard and revoking the old 1-hour ozone standard, the USEPA specifically found that the 8-hour standard was more protective of public health[8]; and therefore, the measures required for the 8-hour standard also function to preserve and strengthen attainment of the 1-hour standard. New Jersey adopted and implemented measures to reduce ozone precursor emissions to meet the 2010 attainment date for the 85 ppb 8-hour standard and make progress towards meeting the 75 ppb NAAQS. These control measures not only help New Jersey meet the 85 ppb 8-hour ozone NAAQS, but also provide reductions for continued attainment of the revoked 1-hour ozone NAAQS.

Rules Already Adopted

Attachment 2 lists the control measures that provide emissions reductions post-2002, and includes both federal and State measures. These rules and regulations will serve to maintain attainment of the 1-hour ozone NAAQS after 2010. Although not necessary to maintain the NNJ-NY-CT area's ozone concentrations below the revoked 1-hour ozone NAAQS, additional federal and State rules adopted for the 75 ppb ozone NAAQS will continue to reduce 1-hour ozone concentrations in the NNJ-NY-CT area.

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[5] USEPA memorandum dated September 4, 1992, entitled Procedures for Processing Requests to Redesignate Areas to Attainment, from John Calcagni, Director, Air Quality Management Division, to Regional Air Directors, page 9.

[6] *Ibid.*

[7] *Wall v. EPA*, 265 F.3d426 (6th Cir. 2001), *Sierra Club v. EPA*, 375 F. 3d 537 (7th Cir. 2004). See also 66 FR 53094, 53099–53100 (October 19, 2001), 68 FR 25413, 25430–25432 (May 12, 2003), 76 FR 79600 (December 22, 2011).

[8] January 5, 2010 Memorandum from Stephen Page, "Guidance on Developing Fee Programs Required by Clean Air Act Section 185 for the 1-hour Ozone NAAQS."

Future Actions for Attainment of the 75 ppb 8-Hour Ozone NAAQS

Both of New Jersey's multi-state nonattainment areas for the 2008 75 ppb 8-hour ozone NAAQS are designated as 'Marginal.' This classification does not require the Department to submit an attainment demonstration plan to USEPA. The Department continues to evaluate the steps needed to ensure that both nonattainment areas will attain the 75 ppb standard. New Jersey is a member of the Ozone Transport Commission (OTC) and is involved with the identification and evaluation of additional control measures.

Transport of Ozone & Precursors

It has been well documented that ozone and its precursor can be transported through the air from state to another state. According to the USEPA's analysis for the Clean Air Interstate Rule (CAIR), as much as 82% of the ozone in New Jersey is transported from out of state sources.[9] Based on USEPA's more recent air quality modeling data for the Cross-State Air Pollution Rule, as much as 67% of the ozone in New Jersey is the product of another state's pollution.[10] Under the Clean Air Act Section 110(a)(2)(D)(i)(I), a state is prohibited from contributing significantly to nonattainment in any other state with respect to any such NAAQS. Our conclusion is that New Jersey will continue to meet the revoked 1-hour ozone NAAQS, but largely dependent on other states and USEPA continuing to implement measures that are already "on the books" and also avoiding increases in ozone precursors, especially on peak ozone days. New Jersey's NOx performance standards for electric generating units would reduce peak NOx generation from electric generating plants in the other states more effectively than cap and trade programs.

CONCLUSION

This report provides information to justify the termination of the Section 185 penalty fee provisions for New Jersey counties in the NNJ-NY-CT 1-hour ozone nonattainment area. Both the air quality monitoring data and the emission inventories show continued downward trends. The long list of control measures that have been implemented for the 8-hour ozone standards will help New Jersey continue to attain the 1-hour standard.

[9] Technical Support Document for the Final Clean Air Interstate Rule, "Air Quality Modeling," March 2005

[10] http://www.epa.gov/airtransport/techinfo.html - "Contributions of 8-hour ozone, annual PM2.5, and 24-hour PM2.5 from each state to each monitoring site" under Technical Support Documents for the Final Cross-State Air Pollution Rule (CSAPR) and the Supplemental Notice of Proposed Rulemaking (SNPR)

Attachment 1

185 Fee Termination

NOx and VOC Emissions Inventory for New Jersey's Portion of the NNJ-NY-CT 1-Hour Nonattainment Area

This attachment contains the NOx and VOC emission inventory for the New Jersey counties in the NNJ-NY-CT 1-hour ozone nonattainment area. Table 2 is the total NOx emissions while Tables 2a through 2d are the sector specific NOx emissions. Similarly, Table 3 is the total VOC emissions while Tables 3a through 3d are the sector specific VOC emissions.

The inventory data are from the ***2007 Inventory and Projections*** project on the MARAMA website (http://www.marama.org/), with the following exceptions:

- 2010 data was compiled with point source data from New Jersey facilities that submitted their 2010 Emission Statements. The 2010 emissions for the other source categories (area, onroad, and nonroad) were estimated using the 2007 and 2020 inventories.
- The summer tons per day data were calculated by the Department using the same methodologies as those used for the 2002 periodic emissions inventory for the point, area and non-road sectors.
- Onroad emissions were calculated using the MOVES model and run by NESCAUM for the regional MARAMA modeling inventory. The annual and summer day emissions were summarized from SMOKE reports.

Table 2: Total NOx Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	43.79	42.02	27.87	-4%	-36%	-34%	22,073	19,363	10,553	-12%	-52%	-45%
Essex	45.34	45.07	38.55	-1%	-15%	-14%	18,945	16,930	12,851	-11%	-32%	-24%
Hudson	46.57	46.86	27.71	1%	-40%	-41%	15,149	12,804	8,505	-15%	-44%	-34%
Hunterdon	21.95	19.71	8.48	-10%	-61%	-57%	5,215	4,470	2,106	-14%	-60%	-53%
Middlesex	64.63	56.86	38.82	-12%	-40%	-32%	21,793	19,021	10,949	-13%	-50%	-42%
Monmouth	31.00	28.21	18.28	-9%	-41%	-35%	14,685	12,968	7,289	-12%	-50%	-44%
Morris	32.86	28.50	14.77	-13%	-55%	-48%	13,139	11,380	5,723	-13%	-56%	-50%
Ocean	34.15	29.10	15.47	-15%	-55%	-47%	11,242	9,933	5,660	-12%	-50%	-43%
Passaic	25.07	21.45	9.13	-14%	-64%	-57%	8,210	7,185	3,820	-12%	-53%	-47%
Somerset	28.40	24.14	10.74	-15%	-62%	-56%	8,730	7,547	3,791	-14%	-57%	-50%
Sussex	16.88	13.95	4.18	-17%	-75%	-70%	3,192	2,833	1,689	-11%	-47%	-40%
Union	43.73	39.32	28.43	-10%	-35%	-28%	17,906	15,505	10,278	-13%	-43%	-34%
Total	434.38	395.20	242.44	-9%	-44%	-39%	160,280	139,938	83,214	-13%	-48%	-41%

Table 2a: Point Source NOx Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	3.51	5.48	3.81	56%	9%	-31%	790	763	895	-3%	13%	17%
Essex	11.96	13.47	12.87	13%	8%	-4%	2,322	1,778	2,607	-23%	12%	47%
Hudson	16.90	20.14	10.83	19%	-36%	-46%	3,838	2,536	1,711	-34%	-55%	-33%
Hunterdon	5.64	5.97	3.35	6%	-41%	-44%	197	167	186	-15%	-5%	12%
Middlesex	20.01	17.42	16.64	-13%	-17%	-4%	2,020	1,767	2,090	-13%	3%	18%
Monmouth	0.66	0.79	0.62	21%	-5%	-21%	158	155	186	-2%	17%	20%
Morris	1.12	0.93	1.08	-17%	-4%	16%	150	104	160	-31%	6%	54%
Ocean	2.79	2.03	2.70	-27%	-3%	33%	247	235	287	-5%	16%	22%
Passaic	0.35	0.40	0.30	14%	-14%	-25%	65	57	85	-12%	30%	47%
Somerset	1.72	1.53	1.70	-11%	-1%	11%	240	197	243	-18%	1%	23%
Sussex	0.07	0.06	0.07	-12%	-5%	7%	31	20	39	-34%	28%	95%
Union	12.10	10.71	9.88	-12%	-18%	-8%	3,668	2,864	2,964	-22%	-19%	3%
Total	76.84	78.95	63.84	3%	-17%	-19%	13,726	10,644	11,452	-22%	-17%	8%

Table 2b: Area Source NOx Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	3.42	3.39	3.27	-1%	-4%	-3%	2,515	2,500	2,451	-1%	-3%	-2%
Essex	2.82	2.79	2.69	-1%	-5%	-4%	2,094	2,077	2,021	-1%	-4%	-3%
Hudson	2.00	1.99	1.93	-1%	-4%	-3%	1,522	1,514	1,486	-1%	-2%	-2%
Hunterdon	0.48	0.47	0.44	-2%	-9%	-7%	378	370	343	-2%	-9%	-7%
Middlesex	3.02	2.99	2.90	-1%	-4%	-3%	2,187	2,175	2,135	-1%	-2%	-2%
Monmouth	2.10	2.08	2.02	-1%	-4%	-3%	1,654	1,646	1,616	-1%	-2%	-2%
Morris	2.18	2.15	2.05	-1%	-6%	-5%	1,564	1,545	1,483	-1%	-5%	-4%
Ocean	1.52	1.51	1.47	-1%	-3%	-3%	1,329	1,323	1,305	0%	-2%	-1%
Passaic	1.49	1.47	1.42	-1%	-4%	-3%	1,138	1,131	1,110	-1%	-2%	-2%
Somerset	1.32	1.31	1.27	-1%	-4%	-3%	939	934	917	-1%	-2%	-2%
Sussex	0.55	0.53	0.48	-3%	-12%	-10%	419	407	365	-3%	-13%	-10%
Union	1.91	1.88	1.81	-1%	-5%	-4%	1,383	1,373	1,337	-1%	-3%	-3%
Total	22.81	22.57	21.75	-1%	-5%	-4%	17,124	16,995	16,568	-1%	-3%	-3%

Table 2c: Onroad Source NOx Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	18.87	17.23	11.77	-9%	-38%	-32%	13,156	11,126	4,359	-15%	-67%	-61%
Essex	11.88	10.86	7.44	-9%	-37%	-31%	8,248	6,984	2,771	-15%	-66%	-60%
Hudson	11.81	10.13	4.54	-14%	-62%	-55%	4,487	3,845	1,705	-14%	-62%	-56%
Hunterdon	11.65	9.56	2.59	-18%	-78%	-73%	3,423	2,853	954	-17%	-72%	-67%
Middlesex	26.21	22.84	11.58	-13%	-56%	-49%	12,950	10,964	4,344	-15%	-66%	-60%
Monmouth	14.81	13.11	7.46	-11%	-50%	-43%	8,730	7,374	2,852	-16%	-67%	-61%
Morris	20.35	17.33	7.25	-15%	-64%	-58%	8,676	7,311	2,762	-16%	-68%	-62%
Ocean	21.16	17.57	5.58	-17%	-74%	-68%	6,963	5,853	2,154	-16%	-69%	-63%
Passaic	17.02	14.15	4.61	-17%	-73%	-67%	5,101	4,330	1,758	-15%	-66%	-59%
Somerset	18.38	15.16	4.43	-18%	-76%	-71%	5,511	4,622	1,657	-16%	-70%	-64%
Sussex	13.78	11.12	2.23	-19%	-84%	-80%	2,031	1,761	863	-13%	-58%	-51%
Union	15.19	13.33	7.12	-12%	-53%	-47%	7,953	6,728	2,644	-15%	-67%	-61%
Total	201.12	172.38	76.59	-14%	-62%	-56%	87,230	73,751	28,823	-15%	-67%	-61%

Table 2d: Nonroad Source NOx Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	NOx (Tons Per Summer Day)			Percent Change			NOx (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	17.99	15.92	9.03	-11%	-50%	-43%	5,611	4,973	2,848	-11%	-49%	-43%
Essex	18.68	17.96	15.55	-4%	-17%	-13%	6,281	6,090	5,452	-3%	-13%	-10%
Hudson	15.86	14.60	10.41	-8%	-34%	-29%	5,302	4,910	3,603	-7%	-32%	-27%
Hunterdon	4.18	3.70	2.11	-11%	-49%	-43%	1,217	1,080	622	-11%	-49%	-42%
Middlesex	15.38	13.61	7.70	-12%	-50%	-43%	4,637	4,116	2,380	-11%	-49%	-42%
Monmouth	13.44	12.22	8.17	-9%	-39%	-33%	4,142	3,794	2,635	-8%	-36%	-31%
Morris	9.21	8.10	4.40	-12%	-52%	-46%	2,749	2,419	1,319	-12%	-52%	-45%
Ocean	8.67	7.99	5.72	-8%	-34%	-28%	2,703	2,521	1,914	-7%	-29%	-24%
Passaic	6.21	5.42	2.80	-13%	-55%	-48%	1,906	1,666	868	-13%	-54%	-48%
Somerset	6.99	6.15	3.35	-12%	-52%	-46%	2,040	1,794	974	-12%	-52%	-46%
Sussex	2.48	2.23	1.40	-10%	-44%	-37%	712	645	423	-9%	-41%	-34%
Union	14.53	13.40	9.62	-8%	-34%	-28%	4,902	4,540	3,333	-7%	-32%	-27%
Total	133.62	121.30	80.26	-9%	-40%	-34%	42,201	38,548	26,371	-9%	-38%	-32%

Table 3: Total VOC Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	53.85	51.21	43.72	-5%	-19%	-15%	22,079	20,122	14,185	-9%	-36%	-30%
Essex	38.07	37.84	34.67	-1%	-9%	-8%	15,668	14,574	11,253	-7%	-28%	-23%
Hudson	33.24	30.25	24.60	-9%	-26%	-19%	10,640	9,793	7,907	-8%	-26%	-19%
Hunterdon	15.09	13.47	7.98	-11%	-47%	-41%	4,339	3,960	2,772	-9%	-36%	-30%
Middlesex	56.34	54.72	46.99	-3%	-17%	-14%	21,407	19,392	15,361	-9%	-28%	-21%
Monmouth	37.57	35.82	30.51	-5%	-19%	-15%	15,547	14,280	10,130	-8%	-35%	-29%
Morris	41.25	38.36	31.34	-7%	-24%	-18%	15,204	13,958	10,014	-8%	-34%	-28%
Ocean	48.50	43.74	27.96	-10%	-42%	-36%	16,591	14,982	9,681	-10%	-42%	-35%
Passaic	33.17	30.21	22.35	-9%	-33%	-26%	10,490	9,574	7,037	-9%	-33%	-27%
Somerset	27.49	25.51	17.91	-7%	-35%	-30%	8,547	7,882	5,718	-8%	-33%	-27%
Sussex	16.85	14.83	8.93	-12%	-47%	-40%	4,798	4,399	3,140	-8%	-35%	-29%
Union	37.17	34.21	30.87	-8%	-17%	-10%	14,329	12,695	9,938	-11%	-31%	-22%
Total	438.61	410.17	327.84	-6%	-25%	-20%	159,638	145,612	107,136	-9%	-33%	-26%

Table 3a: Point Source VOC Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	1.61	1.32	1.64	-18%	2%	24%	431	312	504	-28%	17%	61%
Essex	2.39	2.95	2.43	24%	2%	-18%	611	546	653	-11%	7%	20%
Hudson	3.69	2.71	3.73	-27%	1%	38%	889	682	931	-23%	5%	37%
Hunterdon	0.14	0.16	0.15	11%	3%	-6%	45	29	54	-35%	19%	83%
Middlesex	9.50	10.07	9.65	6%	2%	-4%	2,721	2,129	2,845	-22%	5%	34%
Monmouth	0.55	0.43	0.55	-22%	-1%	28%	116	109	155	-6%	33%	43%
Morris	1.11	0.51	1.12	-54%	1%	120%	165	125	196	-25%	19%	57%
Ocean	0.37	0.35	0.39	-6%	3%	10%	83	78	120	-6%	44%	54%
Passaic	1.33	0.86	1.33	-35%	0%	55%	237	126	268	-47%	13%	113%
Somerset	1.15	1.38	1.16	20%	1%	-16%	265	257	284	-3%	7%	11%
Sussex	0.31	0.12	0.32	-61%	1%	161%	48	34	58	-28%	21%	69%
Union	6.07	4.21	4.53	-31%	-25%	8%	2,000	1,259	1,479	-37%	-26%	18%
Total	28.22	25.06	27.00	-11%	-4%	8%	7,610	5,685	7,548	-25%	-1%	33%

Table 3b: Area Source VOC Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	27.10	26.47	24.38	-2%	-10%	-8%	8,539	8,370	7,808	-2%	-9%	-7%
Essex	23.58	23.13	21.65	-2%	-8%	-6%	7,388	7,269	6,870	-2%	-7%	-5%
Hudson	16.65	16.43	15.72	-1%	-6%	-4%	5,380	5,329	5,158	-1%	-4%	-3%
Hunterdon	4.79	4.69	4.34	-2%	-9%	-7%	1,775	1,734	1,596	-2%	-10%	-8%
Middlesex	25.46	25.18	24.24	-1%	-5%	-4%	8,483	8,396	8,107	-1%	-4%	-3%
Monmouth	19.98	19.60	18.33	-2%	-8%	-6%	6,579	6,465	6,086	-2%	-7%	-6%
Morris	20.78	20.39	19.10	-2%	-8%	-6%	6,686	6,561	6,145	-2%	-8%	-6%
Ocean	16.42	16.23	15.62	-1%	-5%	-4%	5,803	5,742	5,538	-1%	-5%	-4%
Passaic	15.29	15.08	14.39	-1%	-6%	-5%	4,732	4,680	4,505	-1%	-5%	-4%
Somerset	10.08	9.93	9.42	-2%	-7%	-5%	3,294	3,249	3,098	-1%	-6%	-5%
Sussex	4.75	4.69	4.47	-1%	-6%	-5%	1,830	1,799	1,694	-2%	-7%	-6%
Union	19.38	19.10	18.15	-1%	-6%	-5%	6,027	5,952	5,702	-1%	-5%	-4%
Total	204.25	200.91	189.80	-2%	-7%	-6%	66,515	65,544	62,307	-1%	-6%	-5%

Table 3c: Onroad Source VOC Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	7.44	7.35	7.05	-1%	-5%	-4%	7,994	6,767	2,675	-15%	-67%	-60%
Essex	3.28	3.51	4.29	7%	31%	22%	4,905	4,152	1,639	-15%	-67%	-61%
Hudson	8.01	6.76	2.60	-16%	-68%	-62%	2,816	2,394	987	-15%	-65%	-59%
Hunterdon	6.38	5.20	1.24	-19%	-81%	-76%	1,450	1,224	470	-16%	-68%	-62%
Middlesex	9.91	9.10	6.39	-8%	-36%	-30%	6,955	5,912	2,435	-15%	-65%	-59%
Monmouth	5.30	5.17	4.75	-2%	-10%	-8%	5,427	4,600	1,842	-15%	-66%	-60%
Morris	7.96	7.11	4.29	-11%	-46%	-40%	5,127	4,331	1,676	-16%	-67%	-61%
Ocean	13.79	11.54	4.03	-16%	-71%	-65%	4,873	4,109	1,562	-16%	-68%	-62%
Passaic	10.28	8.66	3.24	-16%	-68%	-63%	3,669	3,111	1,251	-15%	-66%	-60%
Somerset	8.69	7.26	2.50	-16%	-71%	-66%	2,956	2,495	959	-16%	-68%	-62%
Sussex	7.07	5.81	1.62	-18%	-77%	-72%	1,517	1,315	642	-13%	-58%	-51%
Union	4.44	4.28	3.75	-4%	-16%	-12%	4,211	3,567	1,419	-15%	-66%	-60%
Total	92.55	81.75	45.74	-12%	-51%	-44%	51,902	43,976	17,557	-15%	-66%	-60%

Table 3d: Nonroad Source VOC Emissions for NJ Counties in 1-Hour Ozone Nonattainment Area

County	VOC (Tons Per Summer Day)			Percent Change			VOC (Tons Per Year)			Percent Change		
	2007	2010	2020	2007-2010	2007-2020	2010-2020	2007	2010	2020	2007-2010	2007-2020	2010-2020
Bergen	17.71	16.08	10.65	-9%	-40%	-34%	5,115	4,673	3,198	-9%	-37%	-32%
Essex	8.83	8.25	6.30	-7%	-29%	-24%	2,763	2,608	2,091	-6%	-24%	-20%
Hudson	4.89	4.35	2.55	-11%	-48%	-41%	1,556	1,389	831	-11%	-47%	-40%
Hunterdon	3.78	3.43	2.26	-9%	-40%	-34%	1,069	973	653	-9%	-39%	-33%
Middlesex	11.47	10.37	6.72	-10%	-41%	-35%	3,249	2,955	1,974	-9%	-39%	-33%
Monmouth	11.75	10.62	6.87	-10%	-42%	-35%	3,425	3,107	2,047	-9%	-40%	-34%
Morris	11.41	10.35	6.84	-9%	-40%	-34%	3,225	2,942	1,996	-9%	-38%	-32%
Ocean	17.92	15.61	7.93	-13%	-56%	-49%	5,832	5,054	2,462	-13%	-58%	-51%
Passaic	6.28	5.61	3.39	-11%	-46%	-40%	1,851	1,657	1,013	-10%	-45%	-39%
Somerset	7.57	6.94	4.84	-8%	-36%	-30%	2,033	1,882	1,377	-7%	-32%	-27%
Sussex	4.72	4.21	2.53	-11%	-46%	-40%	1,402	1,251	745	-11%	-47%	-40%
Union	7.29	6.63	4.44	-9%	-39%	-33%	2,091	1,917	1,337	-8%	-36%	-30%
Total	113.60	102.45	65.30	-10%	-43%	-36%	33,611	30,406	19,725	-10%	-41%	-35%

Attachment 2

185 Fee Termination Determination

Control Measure Benefit Summary for New Jersey Post 2002

Attachment 2												
Control Measure Benefit Summary for New Jersey Post 2002												
Updated through 10/23/2012												
State or Fed	**Control Measure**	**Effective Start Date of Benefits**	**Pollutant**	**Sector**	**Turn Over (1)**	**Estimated Benefits tpy, unless otherwise noted (3)**				**Benefits Reference/Notes (3)**	**New Jersey Admin. Code (NJAC)**	**EPA Approval Date**
						PM2.5	**NOx**	**SO2**	**VOC (2)**			
SIP Measures												
New Jersey	I/M Program for Gasoline Vehicles	1974	VOC, NOx, CO	Onroad		Note 5	Note 5	Note 5	Note 5		NJAC 7:27-15	Various
Federal	Residential Woodstove NSPS	1988	PM2.5, NOx, CO, VOC	Area	x	263	26	5		PM2.5 Redesignation (3)/ Benefits 2007- 2025	NA	NA
Federal	Tier 1 Vehicle Program	1994	PM2.5, NOx, CO, VOC	Onroad	x	Note 5	Note 5	Note 5	Note 5		NA	NA
Federal	Acid Rain	1995	SO2, NOx	Point			NQ	NQ			NA	NA
Federal	Heavy Duty Diesel Vehicle (HDDV) Defeat Device Settlement	1998	NOx	Onroad			NQ				NA	NA
Federal	New Nonroad Engine Standards: Gasoline boats and personal watercraft, outboard engines	1998	VOC, NOx, PM2.5	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
New Jersey	NO_x Budget Program (SIP Call)	1999	NOx	Point			3860 t/ozone season			Rule Proposal 7/20/98, Amended 8/21/00/Overlap with consent decrees and ACO	NJAC 7:27-27.31	5/22/01
Federal	National Low Emission Vehicle Program (NLEV)	1999	PM2.5, NOx, CO, VOC	Onroad	x	Note 5	Note 5	Note 5	Note 5		NA	NA
Federal	Acid Rain	2000	SO2, NOx	Point			NQ	NQ		Some NOx overlap with Nox Budget Program	NA	NA
New Jersey	NO_x Budget Program (SIP Call)	2003	NOx	Point			9140 t/ozone season			Rule Proposal 7/20/98, Amended 8/21/00/Overlap with consent decrees and ACO	NJAC 7:27-27.31	5/22/01

Attachment 2

Control Measure Benefit Summary for New Jersey Post 2002

Updated through 10/23/2012

State or Fed	Control Measure	Effective Start Date of Benefits	Pollutant	Sector	Turn Over (1)	Estimated Benefits tpy, unless otherwise noted (3)				Benefits Reference/Notes (3)	New Jersey Admin. Code (NJAC)	EPA Approval Date
						PM2.5	NOx	SO2	VOC (2)			
Federal	Tier 2 Vehicle Program/Low Sulfur Fuels	2004	PM2.5, NOx, CO, VOC	Onroad	x	Note 5	Note 5	Note 5	Note 5		NA	NA
Federal	Diesel Marine Engines over 37 kW Category 1 Tier 2, Category 3 Tier 1	2004	NOx, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal	Large Industrial Spark-Ignition Engines over 19 kW (>50 hp) Tier 1	2004	NOx, CO	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal	Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder Tier 2	2006	PM2.5, NOx, CO, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal and NJ	EGU Consent Decree (PSE&G Hudson)	2000-2007	PM2.5, SO2, NOx	Point		416	5,850	18,895		Actual Emission Statements (2003 start for PM2.5)	NA	NA
Federal and NJ	EGU Consent Decree (PSE&G Mercer)	2000-2007	PM2.5, SO2, NOx	Point		56	11,678	2,463		Actual Emission Statements (2003 start for PM2.5)	NA	NA
Federal and NJ	Refinery Consent Decrees (Sunoco, Valero, and ConocoPhillips)	2000-2007	PM2.5, SO2, NOx, VOC	Point		566	2,612	5,458	3,105	Actual Emission Statements (2003 start for PM2.5)	NA	NA
New Jersey	ICI, SCT, SRE 2005 (Point Sources)	2007	NOx	Point			6.8 tpd			Rule Proposal - 9/20/04	NJAC 7:27-19.7	7/31/07
Federal	Heavy-Duty Highway Rule - Vehicle Standards and Diesel Fuel Sulfur Control	2007	PM2.5, NOx, CO, VOC	Onroad	x	Note 5	Note 5	Note 5	Note 5		NA	NA
Federal	Diesel Marine Engines over 37 kW Category 2 Tier 2	2007	NOx, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA

Attachment 2												
Control Measure Benefit Summary for New Jersey Post 2002												
Updated through 10/23/2012												
State or Fed	**Control Measure**	**Effective Start Date of Benefits**	**Pollutant**	**Sector**	**Turn Over (1)**	**Estimated Benefits tpy, unless otherwise noted (3)**				**Benefits Reference/Notes (3)**	**New Jersey Admin. Code (NJAC)**	**EPA Approval Date**
						PM2.5	**NOx**	**SO2**	**VOC (2)**			
Federal	Large Industrial Spark-Ignition Engines over 19 kW (>50 hp) Tier 2	2007	NOx, CO	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
New Jersey	EGU - BL England ACO/Acid Rain Program	2000-2009	PM2.5, SO2, NOx	Point		0	3,920	13,919		Actual Emission Statements/ Not in PM2.5 NAA County	NA	NA
Federal and NJ	**Total Onroad Control Measure Benefits in Model 2002-2009**	**2002-2009**	NOx, VOC	Onroad	x	**977**	**81,242**	**2,922**	**49,597**	2002 Modeling Inventory/Statewide/Includes growth (6)	NA	NA
Federal	**Total Control Measure Benefits in Nonroad model 2002-2009**	**2002-2009**	PM2.5, SO2, NOx, VOC	Nonroad	x	**884**	**10,776**	**12,178**	**20,999**	2002 Modeling Inventory/Benefits include growth (6)	NA	NA
New Jersey	High Electric Demand Day (HEDD) Program	2009	SO2, NOx	Point			19.8t/HEDD			Rule Proposal - 8/4/08	NJAC 7:27-19.29	8/3/10
New Jersey	ICI Boilers 2009	2009	NOx	Point			1.7 tpd 408 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.7	8/3/10
New Jersey	Case by Case NO_x (FSELs/AELs)	2009	NO_x	Point			TBD				NJAC 7:27-19.13	8/3/10
New Jersey	Asphalt Production Plants Rule	2009	NOx	Point			0.21 tpd 43 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.9	8/3/10
New Jersey	Sewage and Sludge Incinerators	2009	NOx	Point		NQ	NQ	NQ	NQ	Rule Proposal - 8/4/08	NJAC 7:27-19.28	8/3/10
New Jersey	Municipal Waste Combustors (Incinerators)	2009	NOx	Point			0.3 tpd 67 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.13	8/3/10
Federal	USEPA MACT Standards including Industrial Boiler/Process Heater MACT	2009	VOC	Point and Area			1.3 tpd		2.7 tpd	Ozone SIP(8)	NA	NA
New Jersey	New Jersey Low Emission Vehicle (LEV) Program	2009	PM2.5, SO2, NOx, VOC,	Onroad	x	Note 5	Note 5	Note 5	Note 5		NJAC 7:27-29	2/13/08

Attachment 2												
Control Measure Benefit Summary for New Jersey Post 2002												
Updated through 10/23/2012												
State or Fed	**Control Measure**	**Effective Start Date of Benefits**	**Pollutant**	**Sector**	**Turn Over (1)**	**Estimated Benefits tpy, unless otherwise noted (3)**				**Benefits Reference/Notes (3)**	**New Jersey Admin. Code (NJAC)**	**EPA Approval Date**
						PM2.5	**NOx**	**SO2**	**VOC (2)**			
Federal	Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder Tier 3	2009	PM2.5, NOx, CO, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal	Phase 2 Standards for Small Spark-Ignition Handheld Engines at or below 19 kW (lawn and garden)	1997-2010	NOx, VOC, CO	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
New Jersey	ICI, SCT, SRE 2005 (Area Sources)	2010	NOx	Area			658			PM2.5 Redesignation (3)	NJAC 7:27-19.7	7/31/07
New Jersey	ICI Boilers 2009	2010	NOx	Point			2.2 tpd 740 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.7	8/3/10
New Jersey	Asphalt Production Plants Rule	2010	NOx	Point			0.42 tpd 86 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.9	8/3/10
New Jersey	Municipal Waste Combustors (Incinerators)	2010	NOx	Point			100			Rule Proposal - 8/4/08	NJAC 7:27-19.13	8/3/10
Federal	Heavy-Duty Highway Rule - Vehicle Standards and Diesel Fuel Sulfur Control	2010	PM2.5, NOx, CO, VOC	Onroad	x	Note 5	Note 5	Note 5	Note 5		NA	NA
New Jersey	Vehicle I/M Program Revisions	2010	VOC, NOx, CO	Onroad			6.1 tpd 2,226 tpy NOx+ VOC			Rule Proposal - 8/4/08 Portion of estimated benefits in Total Onroad Benefits in Model	NJAC 7:27-15	9/16/11
New Jersey	Diesel Smoke (I/M Cutpoint) Rule Amendments	2010	PM2.5, NOx	Onroad		0.06 tpd 22 tpy	0.17 tpd 62 tpy		0.59 tpd 215 tpy	Rule Proposal - 6/16/08	NJAC 7:27-14	TBD

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Control Measure Benefit Summary for New Jersey Post 2002

Updated through 10/23/2012

State or Fed	Control Measure	Effective Start Date of Benefits	Pollutant	Sector	Turn Over (1)	Estimated Benefits tpy, unless otherwise noted (3)				Benefits Reference/Notes (3)	New Jersey Admin. Code (NJAC)	EPA Approval Date
						PM2.5	NOx	SO2	VOC (2)			
Federal	New Nonroad Engine Standards: Gasoline boats and personal watercraft inboard engines	2010	VOC, NOx, PM2.5	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal and NJ	EGU Consent Decrees (PSE&G Hudson)	2007-2011	PM2.5, SO2, NOx	Point		2,015	2,606	3,350		Actual Emission Statements (2003 start for PM2.5)	NA	NA
Federal and NJ	EGU Consent Decree (PSE&G Mercer)	2007-2011	PM2.5, SO2, NOx	Point		953	953	13,761		Actual Emission Statements (2003 start for PM2.5)	NA	NA
Federal and NJ	Refinery Consent Decrees (Sunoco, Valero, and ConocoPhillips)	2007-2011	PM2.5, SO2, NOx, VOC	Point		19	1,575	1,232	302	Actual Emission Statements (2003 start for PM2.5)	NA	NA
New Jersey	ICI Boilers 2009	2011	NOx	Point			2.9 tpd 970 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.7	8/3/10
New Jersey	Asphalt Production Plants Rule	2011	NOx	Point			0.64 tpd 132 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.9	8/3/10
New Jersey	Diesel Smoke (I/M Cutpoint) Rule Amendments	2011	PM2.5, NOx	Onroad		0.05 tpd 18 tpy	0.14 tpd 51 tpy		0.55tpd 201 tpy	Rule Proposal - 6/16/08	NJAC 7:27-14	TBD
New Jersey	Vehicle Idling Rule Amendments	2011	PM2.5, NOx	Onroad		200	6 tpd			PM2.5 from Rule Proposal - 9/18/06 NOx from Ozone SIP(8)	NJAC 7:27-14.1, 14.3	4/14/09
Federal	Diesel Marine Engines over 37 kW Category 3 Tier 2	2011	NOx, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal	Phase 2 Standards for New Nonroad Spark-Ignition Nonhandheld Engines at or below 19 kW (lawn and garden)	1997-2012	NOx, VOC, CO	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA

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						PM2.5	**NOx**	**SO2**	**VOC (2)**			
Federal	Recreational Vehicles (includes snowmobiles, off-highway motorcycles, and all-terrain vehicles)	2006-2012	NOx, CO, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
New Jersey	Glass Manufacturing	2012	NOx	Point			3.2 tpd 1,170 tpy			Rule Proposal - 8/4/08	NJAC 7:27-19.10	8/3/10
New Jersey	EGU Rule (other than consent decrees and ACOs))	2013	PM2.5, SO2, NOx	Point			2.16 tpd 788 tpy	7 tpd 2,571 tpy		Rule Proposal - 8/4/08	NJAC 7:27-4.2, 10.2, 19.4	8/3/10
Federal	Nonroad Diesel Engines: ≥ 50 hp All engine sizes ≤ 50 hp	1996-2014	PM2.5, NOx, CO, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal	RICE MACT (Point)	2014	PM2.5, NOx	Point		1	74			PM2.5 Redesignation (3)	NA	NA
Federal	RICE MACT (Area)	2014	PM2.5, NOx	Area		9	In ICI 2005			PM2.5 Redesignation (3)	NA	NA
Federal	Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder Tier 4	2014	PM2.5, NOx, CO, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
New Jersey	High Electric Demand Day (HEDD) Program	2015	SO2, NOx	Point			63.7t/HEDD			Rule Proposal - 8/4/08	NJAC 7:27-19.29	8/3/10
New Jersey	Low Sulfur Distillate and Residual Fuel Strategies (Point)	2014-2016	SO2, NOx	Point				281		PM2.5 Redesignation (3)	NJAC 7:27-9	1/3/12

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						PM2.5	**NOx**	**SO2**	**VOC (2)**			
New Jersey	Low Sulfur Distillate and Residual Fuel Strategies (Area)	2014-2016	SO2, NOx	Area				3,183		PM2.5 Redesignation (3)	NJAC 7:27-27.9	1/3/12
Federal	Diesel Marine Engines over 37 kW Category 3 Tier 3	2016	NOx, VOC	Nonroad	x	Note 7	Note 7	Note 7	Note 7		NA	NA
Federal and NJ	**Total Onroad Control Measure Benefits Model 2007-2025**	**2007-2025**	NOx, VOC	Onroad	x	**3,236**	**94,092**	**84**	**NQ**	PM2.5 Redesignation/ PM2.5 NAA counties only/ Includes growth (6)	NA	NA
Federal	**Total Control Measure Benefits in Nonroad Model 2007-2025**	**2007-2025**	PM2.5, SO2, NOx, VOC	Nonroad	x	**2,053**	**27,059**	**13,099**	**NQ**	PM2.5 Redesignation (3)/ PM2.5 counties only	NA	NA
Not in Maintenance Plan But Supports SIP												
New Jersey	Stage I and Stage II (Gasoline Transfer Operations)	2003	VOC	Area					14.5 tpd	Rule Proposal - 8/5/02	NJAC 7:27-16.3	7/2/04
New Jersey	Architectural Coatings 2005	2005	VOC	Area					25 tpd	Rule Proposal - 7/21/03	NJAC 7:27-23	11/30/05
New Jersey	Consumer Products 2005	2005	VOC	Area					11 tpd	Rule Proposal - 9/15/03	NJAC 7:27-24	1/25/06
New Jersey	Mobile Equipment Repair and Refinishing	2005	VOC	Area					9.0 tpd 3,285 tpy	Rule Proposal - 8/5/02	NJAC 7:27-16.12	7/2/04
New Jersey	Solvent Cleaning	2005	VOC	Area					4.0 tpd 1,460 tpy	Rule Proposal - 8/5/02	NJAC 7:27-16.6	7/2/04
New Jersey	Consumer Products 2009 Amendments	2009	VOC	Area					1.2 tpd	Rule Proposal - 11/5/07	NJAC 7:27-24	7/22/10
New Jersey	Adhesives and Sealants	2009	VOC	Area					6.9 tpd	Rule Proposal - 11/5/07	NJAC 7:27-26	7/22/10
New Jersey	Asphalt Paving	2009	VOC	Area					3.6 tpd 420 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.19	8/3/10

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						PM2.5	**NOx**	**SO2**	**VOC (2)**			
New Jersey	CTG: Flexible Packaging Printing Materials 2010	2009	VOC	Point and Area					35.3	Rule Proposal - 8/4/08	NJAC 7:27-16.7	8/3/10
New Jersey	CTG: Offset Lithographic and Letterpress Printing Materials 2010	2009	VOC	Point and Area					157	Rule Proposal - 8/4/08	NJAC 7:27-16.7	8/3/10
New Jersey	Case by Case VOC (FSELs/AELs)	2009	VOC	Point					TBD		NJAC 7:27-16.17	8/3/10
New Jersey	Petroluem Storage	2010	VOC	Point and Area					2.25 tpd 464 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.2	8/3/10
New Jersey	CTG: Flat Wood Paneling Coatings	2010	VOC	Point and Area					0	Rule Proposal - 8/4/08	NJAC 7:27-16.7	8/3/10
New Jersey	Petroluem Storage	2011	VOC	Point and Area					0.48 tpd 637 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.2	8/3/10
New Jersey	Mercury Rule	2006-2012				NQ	NQ	NQ	NQ		NJAC 7:27-27	NA
Federal	Energy Conservation Standards for New Fed Comm and Multi-Family High-Rise Res Buildings and New Low-Rise Res Buildings	2012	SO2, NOx	Area		NQ	NQ	NQ	NQ		NA	NA
New Jersey	EGU - BL England ACO	2013	PM2.5, SO2, NOx	Point			NQ	NQ		Not in PM2.5 NAA County	NA	NA
New Jersey	Petroluem Storage	2013	VOC	Point and Area					0.95 tpd 984 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.2	8/3/10
New Jersey	New Jersey Clean Construction Program	2014	PM2.5	Nonroad		NQ	NQ	NQ	NQ		NA	NA

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						PM2.5	**NOx**	**SO2**	**VOC (2)**			
New Jersey	Portable Fuel Containers 2005	2005-2015	VOC	Area	x				13 tpd	2007 Inventory	NJAC 7:27-24	7/22/10
New Jersey	Diesel Retrofit Program	2008-2015	PM2.5	Onroad, Nonroad		150				Rule Proposal - 8/6/07	N.J.A.C 7:27-32	NA
Federal and NJ	Refinery Consent Decree (Hess)	2015	PM2.5, SO2, NOx, VOC	Point		NQ	NQ	NQ	NQ		NA	NA
Federal	Mercury and Air Toxics Standards (MATS) Coal- and oil-fired EGUs	2016	PM2.5, SO2, NOx	Point		NQ	NQ	NQ	NQ		NA	NA
New Jersey	Petroluem Storage	2016	VOC	Point and Area					1.58 tpd 1,504 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.2	8/3/10
New Jersey	Portable Fuel Containers 2009 Amendments	2009-2019	VOC	Area	x				12 tpd	2007 Inventory	NJAC 7:27-24	7/22/10
New Jersey	Petroluem Storage	2019	VOC	Point and Area					1.4 tpd 2,024 tpy	Rule Proposal - 8/4/08	NJAC 7:27-16.2	8/3/10
New Jersey	Nonattainment New Source Review (NNSR)	Ongoing	PM2.5, SO2, NOx, VOC	Point and Area		NQ	NQ	NQ	NQ		NJAC 7:27-8	NA
New Jersey	Prevention of Significant Deterioration (PSD)	Ongoing	PM2.5, SO2, NOx, VOC	Point and Area		NQ	NQ	NQ	NQ		NA	NA
New Jersey	Energy Master Plan	Ongoing	Various	All		NQ	NQ	NQ	NQ		NA	NA

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						PM2.5	**NOx**	**SO2**	**VOC (2)**			
	Legend/Notes:											
	NQ = Not Quantified											
	NA = Not Applicable											
	TBD = To Be Determined											
	EGU - Electric Generating Unit											
	ICI = Industrial, Commercial and Institutional Boilers											
	SCT = Stationary Combustion Turbines											
	SRE = Stationary Reciprocating Engines											
	IM = Inspection and Maintenance											
	RICE = Reciprocating Internal Combustion Engines											
	MACT = Maximum Achievable Control Technology											
	CTG = Control Technology Guideline											
	1. Turnover means measure has cumulative benefits each year until complete fleet or equipment turnover											
	2. Although the USEPA does not consider VOC as a PM2.5 precursor for SIP and conformity purposes,											
	NJ anticipates PM2.5 benefit from the implementation of these measures.											
	3. Estimated benefits from the PM2.5 Attainment and Redesignation SIPs are in PM2.5 nonattianment counties only. Actual benefits are statewide											
	Actual benefits are higher due to statewide control measures											
	4. NJDEP SIP Revision for the Attainment and Maintenance of the Fine Particulate Matter (PM2.5)											
	NAAQS: PM2.5 Attainment Demonstration, Final, dated March 26, 2009											
	5. See Total Onroad Control Measure Benefits in Model											
	6. On-road estimated benefits are actually higher, total estimated benefit does not exclude growth in emissions											
	7. See Total Nonroad Control Measure Benefits in Model											
	8. NJDEP SIP Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard:											
	8-Hour Ozone Attainment Demonstration, Final, dated October 29, 2007											